THE PERCEIVED EFFECTS OF THE CROATIAN CUSTOMS SERVICES REFORM: THE OPINION OF FORWARDERS FROM ISTARSKA COUNTY

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Abstract

The reforms of the public sector rank among the most complex problems Croatia has to face in the process of transition and accession to the EU. One of the recent reforms, the Customs Service Reform, offers insights into some of the achieved improvements and may serve as a guideline for reformers in other areas of public management. This research provides evidence of "customer satisfaction" with the functioning of the Croatian Customs System. Conclusions have been drawn based on the responses of 31 forwarders from Istarska County using a 19-item Likert scale. According to their opinion, services have improved in several aspects during the past few years, and accordingly the results can be interpreted as an indication of success of reform efforts.

Key words: public services, quality perception, reform results, customs services

1 Introduction

The general setting of any reform usually includes debates on institutional fit, efficiency of the public sector and the quality of public services. Still, insufficient effort is de-

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dicated to discussing reform results and objectively establishing "cost-efficiencies", improved "service quality" and other outcomes anticipated by strategic documents.

From the economic efficiency perspective, reforms demand resources in order to improve performance. In a market setting, the costs of a reform are expected to be offset by income generated upon its implementation. Reforms in the public sector should follow the same logic. However, observing inputs and outputs in public sector reforms is a far more complex issue, and so are the problems of defining ownership, motivation and control. Seen from the *input* side, public sector reforms bring about substantial investments from government and/or donor funds. Some costs will also be borne by the private sector since institutional changes imply discontinuity costs to the business process, and the presumed end benefactors of institutional reforms are forced to dedicate time and funds in adapting to the new business conditions. On the output side, even though reforms should produce benefits, there might be a problem of following reform results due to a high rate of new reforms running alongside. The motivation to measure outcomes may easily drop as new projects come around and as political leaders and political circumstances change.

Considering the wide population affected by reforms and the narrow time frame available for measurements, we decided to analyze the results of a recently run reform in Croatia. We chose the Customs Service Reform, because we are personally familiar with it since this study complements broader research within a doctoral thesis development.[1]

In this paper, we concentrated on researching solely into the perceptions of quality improvements brought on by the Reform from the perspective of forwarders, taken to constitute a specific group of customs service users. For the purpose of the research, a two-part questionnaire was developed as a research instrument for identifying the awareness of service users of the extent of the reform and their opinions on quality improvements achieved in customs services.

The questionnaire was administered in June 2007. All firms of the originally planned sample (31 respondents) returned the completed questionnaires. Only one respondent did not use the standard answering form, so his questionnaire results had to be discarded.

2 The reform of the Croatian Customs System

We start by providing an overview of the major activities that constitute inputs into the reform of the Croatian Customs System, followed by a reference to activities and measures defined to measure reform outcomes.

The Customs Directorate of Croatia has been implementing reforms aimed at improving customs clearing for several years. Generally, it can be said that substantive reforms began in 2000 with the enforcement of the new Customs Law, by which the Croatian Customs System accepted regulations provided by the European Union's Customs Code. In addition to drafting of the Law, further adjustments were made and as a result, today, the Croatian customs legislation is almost fully adjusted to the European. On Croatian accession to the European Union, Croatian Customs Law will go out of force, and the Cro-

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[1] The thesis focuses primarily on the efficiency gains of the reform. For this purpose some additional questions were added to the questionnaire used in this research.

atian customs territory will become a part of the united European customs territory and wholly regulated by the European Customs Code.

The European Union recognized the need to adjust the Croatian Customs System and therefore included the Customs Directorate of the Republic of Croatia in different programs of assistance. The fundamental, yet not the only, instrument promoting cooperation is the CARDS program, whose primary objective is to support Southeast European countries to actively participate in the stabilization and accession process. Support is structured around financing institution building programs and investment programs.[2] Fund users include public agencies, institutions providing help to legal entities, foundations and non-government organizations. Invested funds are nonrecurring.

Within the CARDS program framework, the Croatian Customs Directorate acts as a coordinator and a beneficiary of several projects. Some of them are:

- *Integrated Border Management (CARDS 2001 – IBM)* of 10.5 million euros, and its main objectives include building the institutional and administrative capacities of Customs Service and Border Police and the strengthening of cooperation among agencies that operate on Croatian border crossings;

- *Integrated Tariff Management System (CARDS 2004 – ITMS)* with the main objectives of disseminating knowledge about the common European tariff system and other related legislation, educating and preparing documentation for IT development;[3]

- *Support to the Customs Administration in the field of excise duties (CARDS 2003 – excise)* with the main objectives of developing the administrative capacities of Croatian Customs Service in the field of excises and EMCS development;

- *Strengthening of the Croatian Customs Laboratories System (CARDS 2003)* aimed at building the capacities of the Croatian Customs laboratory system.

The IBM and ITMS projects are the projects we consider to be the most relevant to our research. Their implementation reflected directly on the effectiveness and efficiency of customs services by influencing customs clearing procedures, and thus the work content of customs officers and the processing time for the movements of goods in international trade.[4]

The main objective of the *Integrated Border Management Project* was defined precisely as the facilitation and acceleration of movement of goods and people, stressing the importance of strengthening inter-agency cooperation at border crossings concomitantly

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[2] The Croatian partner country for implementing of the CARDS program is the Republic of Austria - an EU country, historically, traditionally and culturally very close to Croatia. Under the sponsorship of the European Commission, the Croatian Customs Directorate concluded a twinning contract with the Austrian Customs Service on February 28, 2003, while the implementation of the CARDS project started on March 1, 2003.

[3] Customs cooperation focuses on harmonizing the Croatian Customs System with the European. The European Union is a customs union, meaning that member states have harmonized customs systems, that there are no customs duties among member states, and that the system of customs tariffs to third countries is unique. The harmonization of the Croatian customs system will enable free trade between Croatia and EU member states. Parallel with harmonization, cooperation will be focused on the simplification and modernization of customs procedures, including the education of customs officers and the establishment of a modern customs information system.

[4] In this paper, we try to establish primarily how successfully customs officers perform their everyday duties. Customs clearance is a rather routine procedure, therefore adequate for observing improvements in technical factors such as clearance time, simplified procedures, accessibility of customs officers, etc.

with the protection of the Croatian border. The project was designed to contribute to regional stability due to the strengthening of border controls, and consequent decrease of illegal immigration. The value of the customs subcomponent of this project was 2 million euros, out of which 1.2 million euros were allocated for technical support and 800 000 euros for investments. The project included:

- *legislation development* – analysis of customs legislation needs and shortcomings and the provision of legal advice helping to bring about harmonization of legislation;
- *building administrative capacities and increasing administrative efficiency,* including auditing, anti-fraud management, ethical principles;
- *education of customs officers* – creating a strategy for customs education, trainer education, establishing at Customs Academy;
- *investment component* – information and multimedia equipment, office equipment, vehicles and scanning equipment.

The Customs Directorate had organized and run various seminars and workshops for customs officers since the CARDS project began. Topics covered included: origin of goods, customs tariffs, organization of customs services, organization of the European Commission, organization of border crossings, customs valuation, data collecting and risk analysis, pre-arrival controls and audits, risk management and audit techniques, special customs procedures, passenger's goods, diplomatic goods, customs procedures and establishment of the Customs Academy.

The second important CARDS project, the *Integrated Tariff Management System,* lasted from November 7, 2005 to October 27, 2007. It included seminars, workshops, business trips and meetings of the auditing committee. Processed subjects included TARIC (*Tarif Integré Communautaire*), TQS (*Tariff Quotas and Surveillance*), EBTI (*European Binding Tariff Information*), ISPP (*Information System for Processing Procedures*), SMS (*Specimen Management System*), ECICS (*European Customs Inventory of Chemical Substances*), BOI (*Binding Origin Information*). As a result, every customs house in Croatia has skilled trainers qualified to train other officials in all the areas mentioned above.

From the list of programs and activities mentioned above, it is evident that a large share of resources, not only financial, but also investments of time and effort have been dedicated to designing and implementing the Customs Service Reform. On the other hand, we feel that more should be done in terms of assessing the outcomes. This particularly applies to establishing forms of external evaluation such as analyses of *customer perception* of the values/benefits gained by the reform.

The quality of provided services is a reform result most valuable to service users. In fact, the goal of "increasing the quality of public services" is explicitly mentioned among the eight goals of the State Administration Reform Strategy 2008-2011, right after "improving efficiency and cost-effectiveness" in the public sector. In describing quality as a goal (pp. 4-5), the Strategy also calls for running annual surveys of citizens' opinions to be used along with other (internal) methods of appraisal. However, being a general doc-

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ument that does not concentrate on any specific government service, it does not go into details of how external surveys should be run.

An earlier document, the Action for IBM from 2006, concentrating specifically on Customs, also mentions quality as a reform measure, but it proposes a "quality management system" based solely on internal audit and control. External evaluations are not mentioned (Table 1).[5]

Table 1 Measures of reforms in the Croatian Customs Service

Measure	Explanation
1 Legislation	Croatian customs legislation needs to be completely harmonised with EU customs legislation;
2 Management and organisation	Improving flexibility through decentralisation and decision process delegation and organisational structure changes;
3 Planning process	Improving planning process and quality allocation of human resources and equipment;
4 Quality management system	Establish quality management system based on internal audit and control;
5 Establishing mobile units	Establishing authorised and equipped mobile units with operational competence over the whole Croatian customs territory;
6 Customs procedures	Simplification and standardisation of customs procedures; Establishing permanent customs clearing in customs offices at frequent border crossings; Creating plans for extraordinary situations;
7 Human resources and education	Development of human resources and motivation, creating a strategy for human resources development;
8 Communication and information exchange	Establishing of management information system which provides simple and fast information access;
9 Information for customers	Facilitated information access for customers of Customs service;
10 Public relations	Quality public relation provides increased public identity of customs service, establishing clear procedures of communication with public;
11 Compatibility of IT system	Creating EU compatible IT system of customs service which supports processes in customs service;
12 Infrastructure and equipment	Croatian customs service has to be equipped according requirements of the EU

Source: Vlada RH (2006)

Furthermore, it should be pointed out that the European Commission also periodically evaluates progress and assesses the administrative capacities of the Croatian Customs Directorate. However, apart from some insights into the general comments on the

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[5] In order to bridge this gap, we developed a questionnaire that would assess the opinion of service users and cover some of the goals established as measures of reforms. Our rationale was to assess the improvement achieved in areas most easily observable to service users and leave out the items less visible to outsiders (respondents). Therefore, from the list of reform measures listed in Table 1, we chose to concentrate on the last seven, starting from customs procedures (6-12).

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advancement of the reform, no information about the specific techniques of measuring reform progress is provided. In short, the Commission's report establishes that there is evidence of progress in the field of education of customs officers in the newly established Customs Academy and that considerable progress has been achieved in raising the accessibility of customs services to the trade community. For example, all customs offices extended working hours for receiving customs declarations, some offices made possible the submission of customs declarations after working hours and some are now open 24/7 in order to provide continuous clearing of perishable products. Among the aspects of customs services that still require further attention, the European Commission emphasizes the issue of penalizing violations of procedures and corruption of customs officers. On this matter, the Customs Directorate has started a limited number of processes, but the general opinion is that the initiatives provided to fight corruption by the Customs Directorate are still quite unclear.

3 Approaches to quality

Quality should be observed as a multifaceted phenomenon. In developing our research, we referred primarily to work published by authors empirically researching quality through the lens of customer perception. However, we are aware, that at least two, widely different, approaches in terms of defining and measuring quality exist. One is predominantly technical in nature and is oriented towards developing organizational capacities, while the other sees quality as a value perceived by customers and service users.

The reasons for the evolution of the "technical" concept of quality can be found in the development of manufacturing firms during the 20th century. In the technical setting of the traditional mass production factory and routine procedures, the problem of quality management may be reduced to ensuring conformity to standards. As far as markets are capable of absorbing production, conformance to standards guarantees efficiency of planning and disposing of production factors. Adherence to standards, in the long run, eventually develops time and cost efficient sampling techniques, as well as other forms of system improvement.[6] An additional argument for defining widely recognizable standards of quality derives from globalization, where reliable quality facilitates the exchange of goods and services among firms and geographically dislocated areas.

From the 80s onwards, with the popularization of the quality movement, it has become common to look for sources of quality imbedded in organizations. The reason for studying quality became the development of business systems capable of sustaining stable (business) processes and thus reliable levels of product/service quality. This approach, labeled Total Quality Management (TQM), dominates contemporary Operations Management textbooks (Hill, 2000; Schroeder, 1999; Gaither, 1992). In short, TQM can be defined as a "formalized system for evaluating the *capacity of any organization* to consistently design, provide and deliver products and services to *specification*" (Hill, 2000:343, *highlighted by the authors*).

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[6] When applying the same logic to customs services, technical (measurable) aspects of quality are related to time spent and costs dedicated to customs procedures. The method for reducing costs and time would revolve around formalizing procedures and observing conformity to standards; an issue also relevant for evaluating the improvement in the efficiency of customs services, as in our research.

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Contrary to this predominantly technical approach, the marketing oriented approach does not pre-set standards for quality but tries to understand customer behavior. Instead, researchers in the field of marketing concentrate on quality as a predominantly perceptual phenomenon and the methods used to establish quality are usually customer surveys. In saturated mass markets, consumers do not have detailed technical information that will enable them to precisely recognize the costs and benefits of a purchase. The decision to purchase a product is made on a more or less intuitive/impulsive basis and therefore it depends on the perceived quality.

In academic research, the most common measurement tool is SERVQUAL. SERVQUAL attempts to establish *gaps* between customer perception and expectations (Parasumaran, Zeihaml and Berry, 1985; Cuthbert, 1996; Albaum, 1997; Kueng and Wettstein, 2000). More recently, there is the SERVPERF method that measures service quality based "only on consumers' perceptions of the performance of a service provider" (Brady and Cronim, 2002). The main difference between them is that SERVQUAL uses paired item scales questionnaires to identify gaps between expectations and perceptions of performance, implying that service quality is perceived whenever the customers' perception of performance is equal to or greater than the expected level of service. SERVPERF tries to establish only measures of performance.

Comparing marketing- and operations-oriented approaches, we can observe that quality in a technological sense usually corresponds to the adherence to standards as opposed to quality seen as subjective perception of value gained by the customer. In our research we tried to integrate the technically oriented aspect of quality (the process design and factor contribution approach) and the marketing oriented idea of quality as positive perception of individual consumers. Also, assuming that customers expectation in the case of public services, in our case customs services, would be fuzzy, or at best, based on some comparisons with earlier level of service (before the reform), we deliberately chose not to use SERVQUAL

It should be noted that the term "technical" is also sometimes used in marketing research but with a different meaning. A paper by Brady and Cronin (2001), describing the origins of service quality theory, uses the term "functional quality" to represent the customer's perception of the technical quality reflecting the outcome of the service received. In some further exploration of the results of the reform of the Croatian Customs Service this "technical" outcome might be eventually measured as cost gains achieved because of redesigned customs procedures.

Another useful clue received from Brady and Cronin (2001) concerns the use of a hierarchical approach in grouping variables. We decided to group variables around factors contributing to improvements of customs services, much like the process-oriented TQM approach, rather than to group variables around sub-dimensions of quality perceived by customers.[7]

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[7] Brady and Cronin used open ended questionnaires encouraging respondents to list factors influencing their perception of quality, while we started with a questionnaire targeting measures proposed by the Customs Service Reform.

In the final shaping of our questionnaire, additional useful clues were obtained from Bryer (2006). Bryer sets the concept of "responsiveness" of public administration into a historical setting. He develops a set of six variants of what he calls "bureaucratic responsiveness" that vary in accordance to particular circumstances, determined by the changes in the perception of the role of public administration and the control methods "employed" to direct responses of administrators.

Another issue we wanted to take into consideration, was the effect of the general attitude of our respondents towards the reform of customs services on research results. We feared that a negative personal experience with the reform, specifically since the business of forwarders is bound to decline as custom procedures became simpler, might translate into unfavorable opinions. Here, we were inspired by an article (Yang and Holzer, 2006) indicating possible difficulties in measuring performance of government services due to the lack of trust or misalignment of individual and common interests. Their article also stressed the impact of proper communication strategies on the quality of performance perceived by government service users.

4 Research Methodology

We used a 19-item Likert scale questionnaire to measure respondents' awareness and opinions. Each item was to be graded from 1-5 showing agreement or disagreement with proposed statements (1= strongly agree, 2=agree, 3= neutral, 4= disagree and 5= strongly disagree).

We distributed the questionnaire and asked the respondents to return it either by mail or fax. Each respondent received a letter explaining the purpose of the research, the 19-item questionnaire table and a second table requesting general information about the responding firm. The returned questionnaires were analyzed by nonparametric tests using *"Statistica"*.

During the process of developing our research questionnaire we observed several pointers:

- Our first goal was to estimate the results of a reform project to complement a broader and methodologically more detailed research being developed in a doctoral thesis. Since not much time elapsed from the beginning of the reform, we chose to concentrate on forwarders, as a relatively well-informed fraction of the population daily in touch with customs procedures.
- From the many approaches to quality, we wanted to develop a conceptual framework (section 3) that would be translated into a simple questionnaire form. The collected data should give us an insight into the factors relevant for achieving/managing quality in the customs system.
- We tried to develop a measurement instrument that would spot reform improvements. The Customs Service has multiple roles. However, we concentrated on customs clearings procedures since the results in this domain would be easier to observe.
- We tried to keep the questionnaire short in order to the attention of our respondents and get the maximum number of questionnaires returned.

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Population – sample description

International forwarders constitute the population of firms most immediately influenced by the Customs Service Reform. They have daily contacts with customs officials and are thus the first group of "customers" to gain enough experience in the short period elapsed since the introducing the Reform. Also, we assumed forwarders would be willing to participate in our questionnaire, being professional service providers whose operations depend most directly on the efficiency of customs services. They were also expected to be critical of issues and problems that might have appeared along the reform process. We did, however, fear that generally worsening business conditions for forwarders would lead respondents to an overly negative attitude towards the Customs Services Reform since forwarding activity might decline and small freight forwarders will be run out business. For this reason, several open-ended questions were introduced in a separate part of our questionnaire. This part inquired about general firm data, frequency of contact with customs officials, methods of acquiring information, software used as well as general business position of the forwarder in question.[8]

Geographically, we chose to concentrate our research on Istarska County.[9] Our intention was to have a more homogeneous population in terms of business performance, since not all Croatian counties are equally developed, and some are more, some are less involved in international trade. By restricting our research to a limited area, we reduced the possibility of responses being influenced by more general social and economic conditions.

Istarska County is one of the more entrepreneurial and economically better developed regions in Croatia. With 206 thousands of inhabitants, amounting to 4.65% of the population of Croatia, Istarska County, with almost 7,200 registered business entities, accounts for 9.16% of the total number of Croatian entrepreneurs (Economic Profile of Istarska County in 2006, 2007). It also accounts for a substantial part of Croatian foreign trade: making 1,038.6 million USD in exports, i.e. 10.01% of value of total Croatian exports, 1,127.9 million USD in import, or 5.25% of the value of total Croatian imports.[10]

There are 13 branch customs offices of Pula Customs House in Istarska County, having jurisdiction at 4 road border crossings, 4 sea border crossings, an airport and 8 inland customs offices.

Of the total number of more than 550 business entities registered as forwarders in Croatia (February 1, 2007.), about 10 % are located in Istarska County. The total number of active forwarding agents in Istarska County is 48 at the moment. Since some of the forwarders doing business in Istarska County have their headquarters in other regions and/or are not active (or were in the process of getting out of the business), we concentra-

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[8] This part of the questionnaire provided us with firm-specific information on increasing-decreasing level of activity in the past five years, concerning number of employees, number of clients, earnings and costs. It also contained a blank area for respondents to express their concerns and comments.

[9] The fact that forwarders only from one region were included in the research might generate some questions on whether research conducted on the whole population of forwarders in Croatia might render somewhat different results. However, since the customs system is a centralized system and reforms were directed from the top, we would not expect major discrepancies among answers of respondents coming from different geographical areas.

[10] Even though the trade balance in Istria is negative, as is the trade balance of Croatia as a whole, the disparity between exports and imports in Istria is much smaller.

ted on forwarders actually doing business in Istarska County, i.e. on forwarders submitting customs declarations to the Customs House Pula, no matter on the location of their headquarters. Our final sample included 36 forwarders.

Out of these, 17 are registered as forwarders even though forwarding is their secondary business activity. Respondents were first contacted by phone to inform them about the research and eventually, a second time, after a couple of weeks, if their responses were not sent back. The final response rate was 86.1 %, providing us with a sample of 31 firms. One of the returned questionnaires was discarded since the respondent failed to follow the standard form of completing the questionnaire. The final sample of 30 firms can be considered sufficiently large, especially granting the high proportion of respondents.

The final sample was then categorized by business activity into two subgroups:

Group 1 – Forwarding as only or main line of business (15 firms)

Group 2 – Forwarding as a secondary business activity (15 firms)[11]

The variables

Nine variables were defined to represent favorable opinions of services offered (V1, V2, V3, V5, V7, V8, V9, V10, V12 in table 2); four variables to convey unfavorable opinions (V4, V11, V13, V16). The latter, apart from inquiring into specific items, also served to test scores obtained for positively worded opinions. As the respondents completed the questionnaire on their own, we could not control in advance how seriously respondents would approach the questionnaire. Therefore, we tried mixing positive and negative statements to enable us to spot, later on, eventual respondents that would just circle all answers along the same line, without carefully reading the statements.[12]

The remaining variables were used to test the respondents' awareness of the complexity of the reform process, the steps already taken (e.g. establishment of an internal control unit and the Customs' Academy) and to check their opinions on specific matters (V6, V14, V15, V17, V18, V19). These variables were included to suggest directions for future lines of research.

Variables were grouped to cover three dimensions of quality: the first one being what may be considered an overall measure of quality, indicating the general reform results; and the other two were conceived as indicators of the contribution of human and technical factors to the success of the reform. We added an additional group of variables (miscellaneous), which do not fit any of the previously mentioned groups. Consequently we ended up with four groups of variables:

1 G-1 - general perception that services have improved

Four variables were used to reflect the progress made in the past 3-4 years (V1, V2, V3, V9). The general opinion of the respondents, expressed by the first item of the questionnaire (V1 - *We have noticed an improvement in services during the past 3-4 years*)

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[11] It was not our intention to have the same number of respondents in each sub group.
[12] In general, the respondents filled the questionnaire with care, which can also be observed from the fact that many wrote down short comments in the designated blank area of the questionnaire.

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Table 2 Main questionnaire form

Question	1	2	3	4	5
V1 We have noticed a general improvement of custom services in the past 3-4 years					
V2 Custom procedures take less time now than 3-4 years ago					
V3 Custom procedures are now simpler than they were 3-4 years ago					
V4 Changes in the process happen too often (changes in needed documents, rules, …)					
V5 Methods of disseminating information about these changes are clear, detailed and prompt					
V6 A customs academy or other institution should administer an organized system for educating and certifying forwarders					
V7 Customs officials know their job and perform it correctly					
V8 Customs officials always have enough time and there is no unnecessary waiting					
V9 Customs officials are more responsive than 3-4 years ago					
V10 In their work, custom officials abide by public interest and ethics					
V11 Personal contact with a customs official is important, otherwise there might be delays					
V12 Equipment level at the customs offices conforms with the nature of their tasks					
V13 Investment in equipment by customs lags behind investments carried out by forwarders					
V14 A possibility of e-services (no paper copies) will make our work easier					
V15 A forwarder who is well organized, is capable of rendering faster services and therefore able to decrease costs per job/client					
V16 Customs services in neighboring countries (EU) are better organized than those in Croatia					
V17 The Customs Directorate has established an efficient internal control division within the customs system					
V18 The harmonization of the Croatian Customs System with the European will favor primarily Croatian exporters					
V19 The harmonization of the Croatian Customs System with the European will favor primarily Croatian importers					

Note: The questionnaire was in Croatian and did not specify favorable from unfavorable statements. For practical purposes variable highlights will be abbreviated later on in the paper. It should also be noted that a few respondents did not check a specific field when answering the questionnaire, but rather wrote YES or NO in the box they found most appropriate. The only questionnaire discarded was the one that has checked all his answers as yes and no in the first column, so we could not access his level of conformance with a particular statement.
Source: autor's

was highly positive. We further tested respondents' opinion by differentiating three presumable dimensions of improvements in service quality: V2-*shorter procedures*, V3-*simpler procedures* and V9-*improved responsiveness of customs official to users*. As a final

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confirmation, the general perception of improvement was also tested through the statement that neighboring countries have better customs services (V16).

Group forms the set of dependant variables and constitutes the starting hypothesis that quality of public services has improved due to the Reform.

2 G-2 – quality of personnel (HUMAN FACTOR)

Four variables (V7, V8, V9, V10) were used to establish the quality of personnel. Through these variables we attempted to establish the respondents' perception of the quality of work and attitudes of custom officers by inquiring into their knowledge, availability, responsiveness and their attitude concerning public interest.

3 G-3 – quality of equipment (TECHNICAL FACTOR)

Two variables (V12, V13) were used to inquire directly into the respondents' perception of the technical adequacy of equipment, one phrased to carry a positive connotation and one a negative. Two additional variables, also presented on the list, can be considered as pertaining to the technical factor; variable V5, used to test the perceived quality of the methods of disseminating information on changes and variable V14, asking whether the possibility of using e-services would contribute considerably towards simplifying customs' procedures. Both variables were used to suggest possible procedural/technological deficiencies.

4 G-4 - miscellaneous

The last group of variables (V6, V15, V17, V18 and V19) constitutes a group of answers that offers some insight into the respondents' understanding of the Reform and their general attitude towards the customs harmonization process.

5 Observations and discussion

Three hypotheses were tested:

H1 – The reform has been successful in terms of providing higher customer satisfaction

H2 – The better-informed service users show more positive opinions than the less informed

H3 – The more involved/motivated (the ones whose main line of business is forwarding) have opinions that differ from those of the less involved. [13]

5.1 General opinion

The general opinion on the results of the Customs Reform was positive.

The results obtained are presented in Table 3. It indicates the number of respondents that chose a certain value for each variable and the TOTAL, signifying the overall number of respondents checking each value. The right side of the table shows the sum obtai-

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[13] Hypotheses H2 and H3 were introduced in order to test whether firm-specific data did impact on respondents' opinion on the performance of customs services.

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ned for each variable[14] (calculated as the sum of checked values multiplied by the number of respondents checking these values), the mean value[15] (sum of all scores divided by the number of actual respondents) and the standard deviation (as a measure of dispersion).

As seen from the frequency distribution of positive opinion indicators (Table 3), most answers fall into the categories 1 and 2 (*very much agree and agree*). According to the respondents, excellent results have been obtained by the Reform in terms of the general perception of improvement in the functioning of customs services (mean 2.07). Among specific dimensions of perceived improvements, V2 has the lowest sum (V2-*time to perform procedures compared to 3-4 years ago*) and therefore seems to be the greatest benefit of the Reform, well recognized by the respondents.

In the ranking of the 9 items presented in Table 3, the best ranked would be V2, second best in rank are variables V10 and V1 (*customs officials observing the public interest*

Table 3 Frequency distribution of positive opinion statements

Variable	1	2	3	4	5	Missing cases	Sum	Mean	σ
V1 General improvement	11	11	5	1	2	0	62	2.07	1.14
V2 Procedures last shorter	15	9	4	0	2	0	55	1.83	1.12
V3 Procedures are simpler	9	12	7	0	2	0	64	2.13	1.07
V9 Officials are more responsive	4	12	10	1	2	1	72	2.48	1.02
V7 Officials know their job	5	16	4	2	3	0	72	2.40	1.62
V8 Officials have enough time	5	14	4	4	3	0	76	2.53	1.22
V10 Officials observe the public interest	10	13	2	5	0	0	62	2.07	1.05
V12 Equipment is adequate	7	8	6	4	3	2	72	2.57	1.32
V5 Info dissemination is adequate	0	10	3	7	9	1	102	3.52	1.27
Total	66	105	45	24	26	4			

Source: authors' calculation

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[14] When interpreting "sum" as an aggregate score, positively worded opinion statements with a lower sum value represent a more favorable opinion. For example, if most respondents agree with the statement "Custom procedures now take less time than 3-4 years ago", the total sum of their scores would be low, the lowest possible score being 30, which would mean that all respondents answered the question checking "1" as their opinion. If the reform had no effect in this aspect of performance, and all respondents, therefore, extremely disagreed with the given statement, the maximum possible sum obtained would be 150.

[15] The median and mode for each item are easily observable from the frequency tables.

and general perception of improvements) having the same Sum, but with V10 showing a lower standard deviation. The third best ranked variable would be V3 where respondents recognized that procedures have been simplified. Other indicators of positive opinions also demonstrate service-user satisfaction.

The only exception from the rule refers to the quality of the system of disseminating information. As can be seen from Table 3, respondents' opinions in the case of this factor were both scattered and often unfavorable, resulting in the highest Sum among all variables, positive and negative.

Concerning the *contribution of the human and the technical factors* to the level of service-user satisfaction, the comparison of opinions suggests that the human factor (lower part of Table 3) outperforms the technical factor (Table 4). To a direct question on the perceived improvement in customs officers' responsiveness for the past 3-4 years (V9) 16 answers were positive, while only three were negative (mean=2.48). Similarly, positive attitudes were established for all variables describing the competencies and attitudes of customs officials (V7, V8, V10).

Table 4 Technical dimensions of quality

Variable		1	2	3	4	5	Missing cases	Sum	Mean	σ
V5	Info dissemination is adequate	0	10	3	7	9	1	102	3.52	1.27
V12	Equipment is adequate	7	8	6	4	3	2	72	2.57	1.32
V13	Investment in equipment lags	2	4	13	5	4	2	89	3.18	1.09
V14	Possibility of e-services valuable	18	5	2	2	2	1	52	1.79	1.26
Total		27	27	24	18	18	6			

Source: authors' calculation

Concerning investments into equipment in general, a positive attitude variable V12 was compared (SUM=72, mean score=2.57) to a similarly worded negative variable V13 (SUM=89, mean score=3.18). Still, when checking the negatively phrased statement, most respondents showed neither positive nor negative opinions (mode 3, mode frequency 13).

One of the possible actions to be taken / investments to be made, which is already being considered by the Customs Authorities, is the provision of e-services. Actually, in our pool of respondents, 18 showed a high interest in the possibility of submitting customs declarations through e-mail (V14, mean=1.79; the lowest among all the 19 items in the questionnaire). Some respondents additionally stressed the need for paperless procedures in the special part of the questionnaire asking for open comments. The frequency distri-

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bution for some of the negatively worded variables (Table 5) confirms the impression that the technical aspects of the Reform should receive additional attention.

Table 5 Frequency distribution of negative opinion statements

Variable	1	2	3	4	5	Missing cases	Sum	Mean	σ
V4 Changes happen too often	10	13	5	1	0	1	55	1.90	0.81
V11 Personal contact necessary	13	6	6	3	2	0	65	2.17	1.29
V13 Investment in equipment lags	2	4	13	5	4	2	89	3.18	1.09
V16 EU customs better than Croatian	5	7	10	4	1	3	70	2.59	1.08
Total	30	30	24	13	7	6			

Source: authors' calculation

On the average the score for all negative variables is slightly higher than for positive variables. The average mean, calculated form table 5 is 2.46 for negative opinions against 2.40 for positive opinions (Table 4).

A very homogeneous perception of respondents relates to the frequent changes in the customs system (V4). In fact, the fast rate of changes is the variable that shows the highest agreement among respondents (lowest standard deviation among all variables). According to the opinion of the majority of them, changes happen too often (mean=1.90). Up to a point, this finding can be expected since the main purpose of reforms is to provide change. On the other hand, since changes disrupt existing patterns of behavior and increase the pressure by demanding time, learning, investments in equipment, it is natural to expect the respondents to show some discomfort, if not direct dissatisfaction, with the pace of changes. However, in striving for perfection, observations on this variable could be interpreted as a signal that some action might be directed towards simplifying the process of forwarders' adaptation to imminent changes. A possible way of action, suggested also by the results obtained for variable V5 (for which respondents showed discontent - see Table 4), would be to improve the process of communicating with service users.

It is interesting to note that respondents have shown the most pronounced agreement with statement V14 where 18 respondents checked that they highly agree that the implementation of electronic processing of customs declarations would improve efficiency. This finding confirms that forwarders, as a group, are sensitive to technical factors influencing quality (process design). Consequently, reform managers could win extra support by investing in this area and by stressing technical improvements in their communication with service users. However, the level of investment in equipment by the customs authorities appears to be satisfactory. When comparing investments by forwarders and by

the customs, the majority of respondents perceived no lags of investments by the customs (median=3, mean=3.18).

Finally, as another check-point on the general level of forwarder satisfaction, responses on variable V16, where Croatian customs services are compared to those in the EU, demonstrate only a slightly lower opinion of the quality of Croatian services than that of the customs' authorities of other European countries.

A high proportion of respondents chose to agree with the statement V15 that better organized forwarders have shorter processing and lower costs (Table 6).

Table 6 Frequency distribution of opinions on miscellaneous items

Variable	1	2	3	4	5	Missing cases	Sum	Mean	σ
V6 Academy should be established	13	10	3	2	1	1	55	1.90	1.08
V15 Better org forwarders perform better	18	4	2	2	3	1	55	1.90	1.40
V17 Efficient internal controls exist	4	9	10	2	2	3	70	2.50	1.17
V18 EU harm favors Croatian exporters	11	8	7	4	0	0	64	2.33	1.07
V19 EU harm favors Croatian importers	6	10	10	0	2	2	66	2.36	1.06
Total	42	41	32	10	8	7			

Source: authors' calculation

Service users, as outsiders, are not in the position to perceive/judge the quality of the organizational skills and the efforts applied by Reform managers. For example, the distribution of answers for variable V17, with three missing answers and 10 respondents neither agreeing nor disagreeing with the statement that efficient internal controls exist, suggests rather that respondents do not have an opinion on the issue, rather that they are either satisfied or dissatisfied with the level of services received.

The next step in our research was to establish statistical correlations among our variables. Spearman Rank Order Correlations were calculated using Statistica (with $p < 0.05$) with negatively phased variables recoded (The table is presented in the annex). Statistically significant correlations are evident among all variables relating to the improvement achieved over the past 3-4 years, as well as for the variables describing the capabilities and attitudes of customs officers. The generally high perception of improvement correlated significantly with all nine variables referring to positive attitudes: shorter processing times, simpler procedures, adequate information diffusion, the four variables concerning customs officers', adequate equipment and internal controls. We also noted that the opi-

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nions on the item referring to investment lags. This is one of the items with the lowest opinion score and it statistically correlated only with two of the non-technical items, both concerning customs' officers: familiarity with procedures and responsiveness.

5.2 Subgroup differences

The analysis of the second part of the questionnaire, showing firm-specific information, enabled us to subdivide our sample into sub-samples and thus prove hypotheses H2 and H3.

First we *decomposed customs service-users by line of activity.* However, the results showed that there is not much difference in the opinion poll between strict forwarders and those respondents for which forwarding is not the main line of business. The Kolmogorov-Smirnov comparison of two independent samples (Table 8) showed no statistically significant differences between strict forwarders (s) and diversified businesses (m).

For example, strict forwarders most often chose to strongly agree with the statement that *there have* been noticeable improvements in the services offered by the customs offices during the past 3-4 years (mean 2.13). Seven of the 15 non-forwarders opted for rate 2 (agree) whereas the total average was somewhat higher 2.00. Furthermore, if we subtract two extreme cases, one from each subgroup, that have chosen to strongly disagree with the statement that *customs' services have improved over the past 3-4 years,*[16] the overall opinion about the reform is still favorable, regardless of the respondents' main line of business. (mean s=1.93; mean m=1.79)

Also, when comparing opinions of smaller and larger firms (again using Kolmogorov-Smirnov) we noticed that smaller firms do not show significant differences to the larger ones. However, here, it is possible that the sub-samples of small firms (1 to 10 employees), medium (10-100) and large (>100 employees) were too small for us to perform a reliable statistical analysis. However, it is also very likely that firms, regardless of either size or dominant business line, mostly see reforms in the Croatian Customs System as both needed and successful.

Other descriptive features of respondents were not applicable as selective criteria in defining clear-cut sub-samples.

For example, gathered questionnaires demonstrated that strict forwarders and diversified businesses both employ the same or similar software. Also, almost all respondents wrote they are daily in contact with customs' officials. They predominantly mentioned the exact same means for gathering information on changes in procedures and regulations. These include the official Customs' Gazette, the Customs Directorate web site and personal contacts.

So, considering that the run statistical tests could not show statistically significant differences between sub-samples, we were led to disregard hypotheses H2 and H3. Even though we expected respondents to react to our questions differently depending on their

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[16] The two firms that differ from the general opinion belong one to each subgroup. Their common features are that both are small firms, both express the highest level of agreement with the statement that personal contact is important for efficiently performing custom procedures and both (however, here, they are not alone in this opinion) expect that they will be worse off after Croatia enters the EU.

Table 7 Comparisons of strict forwarders and business with forwarding as a secondary activity

Variable	Kolmogorov-Smirnov Test[a]								
	Max. Neg. Difference	Max. Pos. Difference	p-level	Mean m	Mean s	Standard deviation m	Standard deviation s	Valid number m	Valid number s
Gen. improvement	-0.133333	0.066667	p>0.10	2.000000	2.133333	1.069045	1.245946	15	15
Processing time	-0.133333	0.000000	p>0.10	1.733333	1.933333	1.099784	1.162919	15	15
Simpler procedures	-0.066667	0.066667	p>0.10	2.133333	2.133333	1.060099	1.125463	15	15
Changes too often	-0.066667	0.152381	p>0.10	2.000000	1.800000	0.784465	0.861892	14	15
Adequate info	-0.161905	0.090476	p>0.10	3.428571	3.600000	1.398586	1.183216	14	15
Officers know	-0.066667	0.066667	p>0.10	2.333333	2.466667	1.175139	1.187234	15	15
Officers time	-0.200000	0.000000	p>0.10	2.200000	2.866667	1.146423	1.245946	15	15
Responsive	-0.061905	0.238095	p>0.10	2.571429	2.400000	1.016350	1.055597	14	15
Public interest	0.000000	0.200000	p>0.10	2.266667	1.866667	1.162919	0.915475	15	15
Adequate equipment	-0.071429	0.214286	p>0.10	2.785714	2.357143	1.188313	1.446861	14	14
Investment lags	0.000000	0.142857	p>0.10	3.285714	3.071429	1.069045	1.141139	14	14
E-service	-0.266667	0.095238	p>0.10	1.571429	2.000000	0.755929	1.603567	14	15
EU customs better	-0.087912	0.115385	p>0.10	2.692308	2.500000	1.250641	0.940540	13	14

s – strict forwarders; m – multiple lines of business
By variable: type of business Marked tests are significant at p < 0.05000

Source: Computed using Statistika

size, business line, date of establishment, methods of gathering information and doing business in general, the whole sample demonstrated the same general attitudes.

Particularly, we expected that differences in opinion about the quality of service of customs officers would be caused by inevitable negative outcomes for forwarders once Croatia joins the EU. Forwarders represent a specific line of business where the size of the market and forwarders' incomes directly relate to complicated customs procedures. Contrary to our expectations, there were no significant differences in the opinion of respondents when it comes to evaluating the quality of service and reform outcomes. Not even the negative business perspectives facing forwarders and the expected decline in business activity affected the generally positive opinions.

6 Conclusion

Even though quality has long been recognized as an important phenomenon, questions referring to the models of observing/measuring quality and the ways of providing/

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developing quality continue to intrigue practitioners and researchers. In the case of public sector reforms, improved quality is a common goal sought by fund providers, project managers, reform proponents, service users and researchers. The primary purpose of this paper is to provide some preliminary understanding of the phenomenon of running reforms and organizational changes in the public sector and the adequate metrics for establishing reform results.

In the case of the recent reform of the Croatian Customs System, available documentation demonstrates that much effort and many resources have been dedicated to improving customs services. However, we found no report, or research, that would establish how the business sector was affected by these investments. Wondering about the results achieved by such investments, we tried to run an external evaluation of the reform.

Having no insight into the extent of internal measures of reform results applied by the Customs Directorate, our attention was concentrated on a relatively simple reform outcome – "customer" satisfaction. We targeted the research towards freight forwarders, a category of service users that, to our opinion, would have already been able to gather enough personal experience and form reliable opinions.

A 19-item Likert questionnaire was administered. Conclusions were drawn by basic statistic analysis combined with descriptive data on each respondent. Some questions related to the respondents' perception of changes in the quality of customs services during the past 3-4 years, which in fact corresponds to the period in which the Reform was carried out. Data was also collected on items that might indicate perception of relative quality of two important factors in each reform: the human factor and the technical factor, two factors that, in our opinion, contributed towards the result of any reform.

On the basis of the research, it can be concluded that the general opinion of forwarders on the overall results of the reform of the Croatian Customs System is favorable. However, specific dimensions of achieved improvement did show different ratings. Improvements in processing time (procedures last shorter) received the highest ranking and can, therefore, be considered the most pronounced benefit of the reform. Being an easily observable value to service users, it surely contributed significantly to the overall perception of the success of the reform. An additional important implication of this particular finding, important for the evaluation of the quality achieved in managing the reform process, is that the organizational skills and the process design applied in running the reform were successful. Perception of improvements in other aspects of the customs services mainly served to confirm the general opinion. The worst rank among all items was obtained for the statement concerning the quality of the process of disseminating information. This item, combined with the item related to the fast rate of change, were the points of highest discontent.

Even though this research may shed some light on public sector reforms in Croatia in the past decade, generalizations referring to public sector reforms in general would not be reliable. First of all, the study only dealt with customs services, not other forms of public services and secondly, the questionnaire was run on a rather small and regionally oriented sample.

There are two points that came to our attention during the research that deserve further investigation.

• *Our analysis seems to suggest that reforms in the public sector can work out and be perceived as successful even in situations when changes result in the worsening of general business conditions of those influenced*

At the outset of the research, we had some fears that generally worsening business conditions could distort the perception of forwarders. This concern led us to include several additional items in the main questionnaire and a set of descriptive variables. We expected that respondents' specific factors such as size, scope of activities, increasing or decreasing business activity, technology and processes employed would result in statistically different opinions on the quality of customs' services. The fact that we achieved a response rate above our expectations confirms that freight forwarders, as a directly affected group of stakeholders, showed not only interest in our research, but also and more important, satisfaction with reform results. Even though the business of forwarders, as a group, will be negatively affected once Croatia joins the European Union, they express favorable opinions concerning the results obtained through the Reform. We noticed no considerable differences between strict forwarders and diversified businesses, which confirms us in this finding. Presuming that the more diversified businesses would have an easier time adjusting to new circumstances, we expected rather different opinions compared to those of strict forwarders. Even though more than half of the number of strict forwarders explicitly said that once Croatia joins the EU, they will undergo a drop in revenues and employment, and some will even go out of business, their opinion of the Reform results seems very favorable.

• *Our study indicated that the technical factor contributing to service quality received slightly less favorable opinions than the human factor.*

Reforms are usually run with high levels of attention being dedicated to the human factor. Education, motivation and other investments dedicated to improving the 'human side' surely produce a positive impact on reform results. In the case of the customs services, the opinions of respondents that refer the improvement of the human factor (competence, responsiveness...) leave no reason for dissatisfaction. However, it is possible that less attention has been dedicated to the technical side of the Reform. When it comes to opinions concerning information technology upgrades and satisfaction with the process of disseminating information, the collected answers become more dispersed and show a tendency towards lower levels of satisfaction. This indicated that, as a group, forwarders are sensitive to technical and process-design issues. A higher awareness of the importance of Reform managers on the importance of prompt communication of changes (improvements) on technical issues might work as an efficient, and yet not a too costly, way to improve service users' perception of Reform benefits.

Annex 1.

Spearman Rank Order Correlations[a]

	gen	shorter	simpler	change	info	academy	know	time	response	public	personal	equip	Inv lag	ICT	forwarder	EUbetter	int ctr	export	import
gen		0.457201	0.707166	0.099286	0.446887	0.052376	0.731894	0.711590	0.541936	0.588707	0.046477	0.636659	-0.158888	0.330924	0.100686	0.033363	0.754922	-0.188760	0.337943
shorter	0.457201		0.693121	0.257345	0.263030	0.023088	0.417724	0.482197	0.298843	0.229358	0.198830	0.240583	-0.140758	-0.167856	-0.011320	0.263090	0.376082	-0.373872	0.189065
simpler	0.707166	0.693121		0.116404	0.506383	0.067059	0.635635	0.639643	0.622804	0.428883	0.000495	0.537463	-0.074902	0.034146	0.034706	0.055803	0.639127	-0.173482	0.334296
change	0.099286	0.257345	0.116404		0.436325	-0.166298	0.034731	0.210225	-0.041609	0.042840	0.161825	-0.060438	-0.072973	-0.340140	0.336414	0.001525	0.163383	-0.023188	-0.061813
info	0.446887	0.263030	0.506383	0.436325		-0.029978	0.295149	0.365155	0.314822	0.212706	0.132371	0.486041	-0.043019	0.016131	0.103014	-0.029769	0.448815	-0.074531	0.115186
acad	0.052376	0.023088	0.067059	-0.166298	-0.029978		0.141448	0.106103	0.381126	-0.161984	0.087695	0.125921	0.054729	0.266610	0.118066	-0.464524	0.018691	0.055038	-0.039320
know	0.731894	0.417724	0.635635	0.034731	0.295149	0.141448		0.881127	0.691059	0.716409	0.128589	0.400031	-0.423407	0.217717	0.164853	0.011028	0.668583	-0.213739	0.096245
time	0.711590	0.482197	0.639643	0.210225	0.365155	0.106103	0.881127		0.603436	0.541757	0.047567	0.333296	-0.270254	0.152721	0.140778	0.024715	0.716400	-0.060961	0.094148
respon	0.541936	0.298843	0.622804	-0.041609	0.314822	0.381126	0.691059	0.603436		0.385160	0.056539	0.281407	-0.385431	0.183476	0.230350	-0.318647	0.470506	-0.166314	-0.034539
public	0.588707	0.229358	0.428883	0.042840	0.212706	-0.161984	0.716409	0.541757	0.385160		0.059373	0.261672	-0.194566	0.020590	-0.132021	0.056022	0.431737	-0.012890	0.117426
pers	0.046477	0.198830	0.000495	0.161825	0.132371	0.087695	0.128589	0.047567	0.056539	0.059373		-0.216975	-0.240561	-0.151985	-0.029799	0.081148	-0.011553	-0.192282	-0.397819
equip	0.636659	0.240583	0.537463	-0.060438	0.486041	0.125921	0.400031	0.333296	0.281407	0.261672	-0.216975		0.168392	0.421995	-0.121422	-0.116053	0.548977	-0.108911	0.382976
inv lag	-0.158888	-0.140758	-0.074902	-0.072973	-0.043019	0.054729	-0.423407	-0.270254	-0.385431	-0.194566	-0.240561	0.168392		0.112709	-0.298959	-0.023559	-0.094731	0.221015	0.022293
ICT	0.330924	-0.167856	0.034146	-0.340140	0.016131	0.266610	0.217717	0.152721	0.183476	0.020590	-0.151985	0.421995	0.112709		0.271366	-0.134588	0.011727	-0.005033	0.324752
forw	0.100686	-0.011320	0.034706	0.336414	0.103014	0.118066	0.164853	0.140778	0.230350	-0.132021	-0.029799	-0.121422	-0.298959	0.271366		0.115440	0.032071	-0.291017	-0.036768
EUbett	0.033363	0.263090	0.055803	0.001525	-0.029769	-0.464524	0.011028	0.024715	-0.318647	0.056022	0.081148	-0.116053	-0.023559	-0.134588	0.115440		-0.139409	-0.160067	0.060038
int ctr	0.754922	0.376082	0.639127	0.163383	0.448815	0.018691	0.668583	0.716400	0.470506	0.431737	-0.011553	0.548977	-0.094731	0.011727	0.032071	-0.139409		-0.170397	0.158925
export	-0.188760	-0.373872	-0.173482	-0.023188	-0.074531	0.055038	-0.213739	-0.060961	-0.166314	-0.012890	-0.192282	-0.108911	0.221015	-0.005033	-0.291017	-0.160067	-0.170397		-0.031257
import	0.337943	0.189065	0.334296	-0.061813	0.115186	-0.039320	0.096245	0.094148	-0.034539	0.117426	-0.397819	0.382976	0.022293	0.324752	-0.036768	0.060038	0.158925	-0.031257	

[a]*Marked correlations are significant at p <.05000*

Source: authors' calculation

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